

AMENDMENTS TO THE CLAIMS:

1. (Currently Amended) A common platform for use with a host computer capable of controlling more than one type of equipment sensors, said common platform comprising:
 - a host interface for communicating with said host computer;
 - a control interface for communicating with an equipment sensor;
 - a memory for storing bootloader software; and
 - a processor coupled to said memory, said host interface and said control interface;said processor executing said bootloader software for performing the steps of:
 - automatically downloading extension software into said memory;
 - executing the downloaded extension software;
 - under the control of the downloaded extension software, determining the type of said equipment sensor;
 - responsive to a result of the determining step, downloading application software corresponding to the type of equipment sensor into said memory, wherein the application software is used for configuring the common platform for use with the equipment sensor;and
 - executing said application software.
2. (Original) The common platform of Claim 1, wherein said application software produces steps to configure said common platform to perform a predetermined function.
3. (Original) The common platform of Claim 1, wherein said equipment sensor is removably attached to said common platform.

4. (Original) The common platform of Claim 1, wherein said host interface complies with a standard selected from a set of standards comprising Universal Serial Bus standard and RS232 standard.

5. (Currently Amended) The common platform of Claim 1, further comprising:
configurable power interface for selecting one of a plurality of power sources for providing power to the common platform; and
a power control module for providing the selected one of the plurality of power sources power to said common platform, wherein the selected one of the plurality of power sources is from a power source selected from a set of power sources consisting of a power source embedded in said common platform, a power source provided from said host computer, and a power source external to said common platform and external to said host computer.

6. (Original) The common platform of Claim 5, wherein said equipment sensor is selected from a group of equipment sensors consisting of an alignment sensor, a gravity sensor, and an image-capturing device for capturing images of objects.

7. (Original) The common platform of Claim 1, wherein said processor sends information to said host computer indicating at least one of the following:
the type of said equipment sensor;
the version of said equipment sensor; and
the version of said application software that has been loaded to said memory.

8. (Original) The common platform of Claim 1, wherein said application software interfaces with said host computer to cause said host computer to run drivers corresponding to the function which said common platform is being performed.

9. (Original) The common platform of Claim 8, wherein said bootloader software is stored in a first memory and said application software is stored in a second memory.

10. (Original) The common platform of Claim 9, wherein said first memory is a non-volatile memory.

11. (Currently Amended) A common platform for use with a host computer capable of controlling more than one type of equipment sensors, said common platform comprising:

a host interface for communicating with said host computer;

a control interface for communicating with an equipment sensor;

a memory for storing bootloader software and application software; and

a processor coupled to said memory, said host interface and said control interface;

said processor configured for executing said bootloader software to perform the steps of:

automatically downloading extension software into said memory;

executing the downloaded extension software;

under the control of the downloaded extension software, determining the type of said equipment sensor;

under the control of the downloaded extension software, determining whether said application software stored in said memory matches the type of said equipment sensor;

if said application software matches said equipment sensor, then executing said application software;

if the application software does not match said equipment sensor, then downloading new application software corresponding to said equipment sensor into said memory,

wherein the application software is used for configuring the common platform for use with the equipment sensor.

12. (Currently Amended) A method for preparing a common platform for use with a host computer capable of controlling more than one type of equipment sensors connected to said common platform, the method comprising the steps of:

reading bootloader software stored in said common platform;

executing the bootloader software;

under the control of the bootloader software, automatically downloading extension software into said common platform;

executing the downloaded extension software;

under the control of the downloaded extension software, determining the type of equipment sensor connected to said common platform;

responsive to a result of the determining step, downloading application software corresponding to the type of said equipment sensor to said common platform; and

configuring said common platform to perform a predetermined function based on the downloaded application software.

13. (Original) The method of claim 12, further comprising a step of sending a signal to said host computer indicating the existence of said common platform.

14. (Original) The method of claim 12, wherein said equipment sensor is selected from a group of equipment sensors consisting of an alignment sensor, a gravity sensor, and an image-capturing device for capturing images of objects.

15. (Original) The method of claim 12, wherein before the step of downloading application software, the method further comprises a step of sending information to said host computer indicating at least one of the following:

the type of said equipment sensor;

the version of said equipment sensor; and

the version of said application software that has been loaded to said common platform.

16. (Currently Amended) A method for preparing a common platform for use with a host computer capable of controlling more than one type of equipment sensors connected to said common platform, the method comprising the steps of:

reading bootloader software stored in said common platform;

executing the bootloader software;

under the control of the bootloader software, automatically downloading extension software into said common platform;

executing the downloaded extension software;

under the control of the downloaded extension software, determining the type of equipment sensor connected to said common platform; and

determining whether application software stored in said common platform matches the type of said equipment sensor;

if said application software matches the type of said equipment sensor, then executing said application software;

if said application software does not match the type of said equipment sensor, then downloading new application software corresponding to said equipment sensor type into said common platform; and

configuring said common platform to perform a predetermined function based on the application software.

17. (Currently Amended) A common platform for use with a host computer capable of controlling more than one type of equipment sensors, said common platform comprising:

a host interface for communicating with said host computer;

a control interface for communicating with an equipment sensor;

a memory for storing bootloader software and application software; and

a processor coupled to said memory, said host interface and said control interface;

said processor configured for executing said bootloader software to perform the steps of:

automatically downloading extension software into said memory;

under the control of the downloaded extension software, identifying a type of said equipment sensor to said host computer;

under the control of the downloaded extension software, identifying the version of
said application software stored in said memory to said host computer;

said host computer then determining whether said application software stored in said
memory matches the type of said equipment sensor;

if said application software matches said equipment sensor, then causing said
common platform to execute said application software; and

if said application software does not match said equipment sensor, then downloading
new application software corresponding to said equipment sensor into said memory,

wherein the application software is used for configuring the common platform for use with
the equipment sensor.

18. (Previously presented) The common platform of claim 1, wherein the common
platform transfers information collected by the equipment sensor to the host computer and the
processor downloads the application software corresponding to the equipment sensor from the host
computer.

19. (Previously presented) The common platform of claim 11, wherein the common
platform transfers information collected by the equipment sensor to the host computer and the
processor downloads the new application software corresponding to the equipment sensor from the
host computer.

20. (Previously presented) The method of claim 12, wherein the common platform transfers information collected by the equipment sensor to the host computer and the application software corresponding to the type of the equipment sensor is downloaded from the host computer.

21. (Previously presented) The method of claim 16, wherein the common platform transfers information collected by the equipment sensor to the host computer and the application software corresponding to the type of the equipment sensor is downloaded from the host computer.

22. (Previously presented) The common platform of claim 17, wherein the common platform transfers information collected by the equipment sensor to the host computer and the application software corresponding to the type of the equipment sensor is downloaded from the host computer.

23. (Currently Amended) A common platform configured to detachably couple to for use with a host computer of an automotive service system capable of controlling more than one type of equipment sensors, said common platform comprising:

host interface means for communicating with said host computer;

control interface means for communicating with an equipment sensor, wherein the equipment sensor is configured to detachably couple to the common platform and to collect parameters related to a vehicle;

memory means for storing bootloader software; and

processor means, coupled to said memory, said host interface and said control interface, for executing said bootloader software to perform the steps of:

determining the type of said equipment sensor; and
responsive to a result of the determining step, downloading application software
corresponding to the type of equipment sensor into said memory means, wherein the
application software is used for configuring the common platform for use with the
equipment sensor.

24. (Previously presented) The common platform of claim 23, wherein the common platform transfers information collected by the equipment sensor to the host computer and the application software corresponding to the type of the equipment sensor is downloaded from the host computer.

25. (Currently Amended) A common platform configured to detachably couple to for
~~use with~~ a host computer of an automotive service system capable of controlling more than one type of equipment sensors, said common platform comprising:

host interface means for communicating with said host computer;

control interface means for communicating with an equipment sensor, wherein the
equipment sensor is configured to detachably couple to the common platform and to collect
parameters related to a vehicle;

memory means for storing bootloader software and application software; and

processor means, coupled to said memory, said host interface and said control interface, for executing said bootloader software to perform the steps of:

determining the type of said equipment sensor; and

determining whether said application software stored in said memory means matches the determined type of said equipment sensor;

if said application software matches said determined type of equipment sensor, then executing said application software; and

if the application software does not match said determined type of equipment sensor, then downloading new application software corresponding to said determined type of equipment sensor into said memory means,

wherein the application software is used for configuring the common platform for use with the equipment sensor.

26. (Previously presented) The common platform of claim 25, wherein the common platform transfers information collected by the equipment sensor to the host computer and the application software corresponding to the type of the equipment sensor is downloaded from the host computer.

27. (New) The common platform of claim 1, wherein the control interface includes a programmable circuit.

28. (New) The common platform of claim 1, wherein the processor programs the control interface based on the downloaded application software.

29. (New) The common platform of claim 11, wherein the control interface includes a programmable circuit.

30. (New) The common platform of claim 29, wherein the processor programs the control interface based on the downloaded application software.

31. (New) The method of claim 12 further comprising the step of communicating with the equipment sensor via a control interface.

32. (New) The method of claim 31, wherein the processor programs the control interface based on the downloaded application software.

33. (New) The method of claim 16 further comprising the step of communicating with the equipment sensor via a control interface.

34. (New) The method of claim 33, wherein the processor programs the control interface based on the downloaded application software.

35. (New) The common platform of claim 17, wherein the control interface includes a programmable circuit.

36. (New) The common platform of claim 35, wherein the processor programs the control interface based on the downloaded application software.

37. (New) The common platform of claim 23, wherein the control interface means includes a programmable circuit.

38. (New) The common platform of claim 37, wherein the processor programs the programmable circuit based on the downloaded application software.

39. (New) The common platform of claim 25, wherein the control interface means includes a programmable circuit.

40. (New) The common platform of claim 39, wherein the processor programs the programmable circuit based on the application software.

41. (New) A common platform for use in an automotive service system external to a vehicle, the common platform comprising:

a host interface for detachably coupling the automotive service system;

a control interface configured to detachably receive an equipment sensor;

a memory for storing first software; and

a processor coupled to the memory, the host interface and the control interface;

wherein the processor, upon execution of the first software software, performs the steps of:

automatically downloading second software into the memory;

executing the downloaded second software;

under the control of the downloaded second software, determining the type of the equipment sensor; and

responsive to a result of the determining step, downloading third software corresponding to the type of equipment sensor into the memory, wherein the third software is used for configuring the common platform for use with the equipment sensor.

42. (New) The common platform of claim 41, wherein the common platform is configured to removably connect to the automotive service system.

43. (New) The common platform of claim 41, wherein the equipment sensor is configured to collect parameters of the vehicle.

44. (New) The common platform of claim 41, wherein the equipment sensor is an alignment sensor.

45. (New) The common platform of claim 41, wherein the control interface includes a programmable circuit.

46. (New) The common platform of claim 45, wherein the processor programs the programmable circuit based on the application software.

47. (New) A common platform for use in an automotive service system, the common platform comprising:

a host interface for communicating with the automotive service system;

a control interface configured to communicate with an equipment sensor, wherein the control interface includes a programmable circuit;

a memory for storing bootloader software; and

a processor coupled to the memory, the host interface and the control interface;

wherein the processor, upon execution of the bootloader software, performs the steps of:

determining the type of the equipment sensor;

responsive to a result of the determining step, downloading application software corresponding to the type of equipment sensor into the memory; and

programming the programmable circuit of the control interface based on the downloaded application software.

48. (New) An automotive service system external to a vehicle, the system comprising:
an equipment sensor for collecting parameters of the vehicle;
a data processing system;
a common platform configured to detachably couple to the data processing system and to detachably receiving the equipment sensor, wherein the common platform including:

a host interface for communicating with the data processing system;

a control interface for communicating with the equipment sensor;

a memory for storing first software; and

a processor coupled to the memory, the host interface and the control interface;

wherein the processor, upon executing the first software, performs the steps of:

automatically downloading second software into the memory;

executing the downloaded second software;

under the control of the downloaded second software, determining the type of the equipment sensor; and

responsive to a result of the determining step, downloading third software corresponding to the type of equipment sensor into the memory, wherein the third software is used for configuring the common platform for use with the equipment sensor.

49. (New) The system of claim 48, wherein the control interface includes a programmable circuit.

50. (New) The system of claim 49, wherein the processor programs the programmable circuit based on the downloaded third software.

51. (New) An automotive service system external to a vehicle, the system comprising:
an equipment sensor for collecting parameters of the vehicle;
a data processing system;
a common platform configured to detachably couple to the data processing system and to detachably receive the equipment sensor, wherein the common platform includes:

- a host interface for communicating with the data processing system;
 - a control interface for communicating with the equipment sensor, wherein the control interface includes a programmable circuit;
 - a memory for storing bootloader software; and
 - a processor coupled to the memory, the host interface and the control interface;
- the processor, upon executing the bootloader software, performing the steps of:
- determining the type of the equipment sensor;

responsive to a result of the determining step, downloading application software corresponding to the type of equipment sensor into the memory; and programming the programmable circuit based on the downloaded application software.

52. (New) A common platform for use with a host computer capable of controlling more than one type of equipment sensors, said common platform comprising:

host interface means for communicating with said host computer;

control interface means for communicating with an equipment sensor;

memory means for storing bootloader software; and

processor means, coupled to said memory, said host interface and said control interface, for executing said bootloader software to perform the steps of:

automatically downloading extension software;

executing the downloaded extension software;

under the control of the downloaded extension software, determining the type of said equipment sensor; and

responsive to a result of the determining step, downloading application software corresponding to the type of equipment sensor into said memory means, wherein the application software is used for configuring the common platform for use with the equipment sensor.

53. (New) A common platform for use with a host computer capable of controlling more than one type of equipment sensors, said common platform comprising:

host interface means for communicating with said host computer;

control interface means for communicating with an equipment sensor;

memory means for storing bootloader software and application software; and

processor means, coupled to said memory, said host interface and said control

interface, for executing said bootloader software to perform the steps of:

automatically downloading extension software;

executing the downloaded extension software;

under the control of the downloaded extension software, determining the type of said equipment sensor; and

under the control of the downloaded extension software, determining whether said application software stored in said memory means matches the type of said equipment sensor;

if said application software matches said equipment sensor, then executing said application software; and

if the application software does not match said equipment sensor, then downloading new application software corresponding to said equipment sensor into said memory means,

wherein the application software is used for configuring the common platform for use with the equipment sensor.